United States Patent [19]

Brennan et al.

[11] **Patent Number: 4,589,900**

[45] **Date of Patent: May 20, 1986**

[54] **HIGH-STRENGTH THERMALLY STABLE MAGNESIUM ALUMINOSILICATE GLASS-CERAMIC MATRIX SIC FIBER COMPOSITE**

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[21] Appl. No.: **781,309**

[22] Filed: **Sep. 27, 1985**

Related U.S. Application Data

[60] Continuation of Ser. No. 644,003, Aug. 24, 1984, abandoned, which is a division of Ser. No. 476,301, Mar. 17, 1983.

[51] **Int. Cl.**[4] **C03C 10/06**; C04B 35/56

[52] **U.S. Cl.** **65/33**; 264/65; 428/698; 501/8; 501/9; 501/32; 501/88; 501/95; 501/89

[58] **Field of Search** 501/8, 9, 95, 88, 89, 501/32; 428/698; 264/65; 65/33

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[57] **ABSTRACT**

A silicon carbide fiber reinforced barium modified magnesium aluminosilicate matrix composite is described having high strength and thermal stability at temperatures in excess of 1200° C. The matrix material contains about 5% to about 14% magnesium oxide and about 5% to about 25% barium oxide. While any suitable ratios of fiber to matrix can be used, the composite for most applications for example, in the heat engine area, will contain approximately 20% to 50% by volume silicon carbide fibers.

2 Claims, 1 Drawing Figure